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Comparison of the effect of phototherapy with oral calcium versus phototherapy alone in the treatment of unconjugated hyperbilirubinemia in healthy term infants

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Abstract

BACKGROUND AND OBJECTIVE: Jaundice (hyperbilirubinemia) is one of the most common clinical complaints during infancy among term and premature infants during the first week of life. Phototherapy is an effective and accepted treatment for neonatal hyperbilirubinemia, which may be associated with complications such as skin, eye and electrolyte disorders. This study was performed to compare the effect of phototherapy with oral calcium versus phototherapy alone in the treatment of unconjugated hyperbilirubinemia in healthy term infants.

METHODS: This clinical trial study was performed on 50 healthy term infants with jaundice (serum bilirubin 6.9-21 mg/dL). Neonates were randomly divided into intervention (50 mg/kg body weight of oral calcium with phototherapy) and control (phototherapy) groups. Data related to age, gender, birth weight, gestational age, number of hospitalization days and bilirubin level at the beginning of hospitalization and at 24, 48 and 72 hours were collected and compared in a checklist.

FINDINGS: Decrease in total bilirubin level was observed with a significant difference between the two groups (p=0.000). The mean unconjugated hyperbilirubinemia showed significant difference in the intervention group (2.1±0.5 mg/dl) and the control group (2.6±1.3 mg/dl) (p=0.03). The changes in unconjugated hyperbilirubinemia in repeated measures was also significant in the intervention group (p=0.01).

CONCLUSION: The results of the study showed that oral calcium with phototherapy may be effective in reducing neonatal jaundice.

keywords

Calcium; Infant; Oral; Phototherapy; Treatment; Unconjugated Hyperbilirubinemia